

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P562552

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562552
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-2HI-40-UNV-80-88-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6860.0 lumens
Efficiency: N/A
Efficacy: 79.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

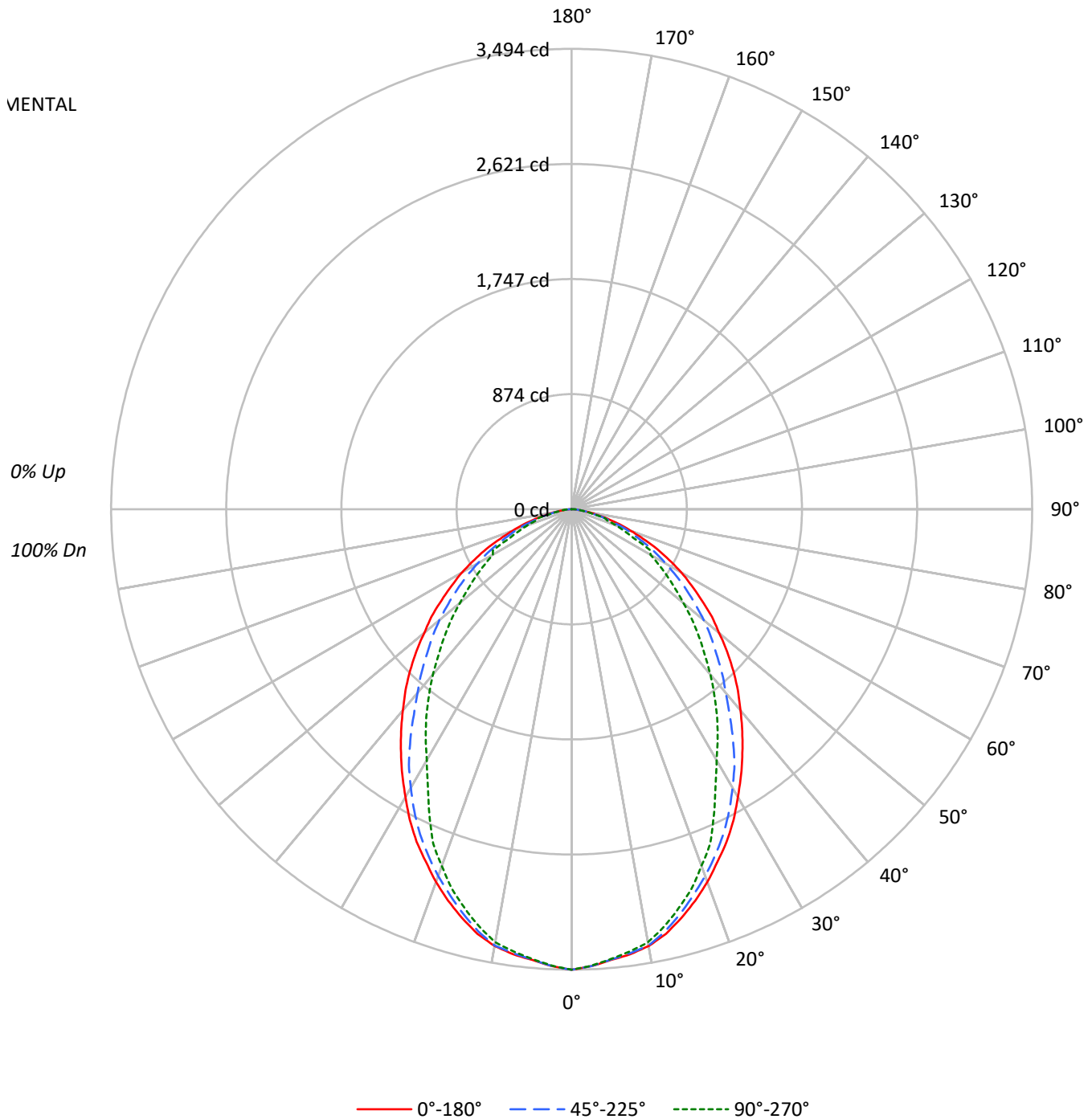
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									20									
RC	80									70									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4702	4702	4702
5°	4638	4632	4627
10°	4598	4592	4559
15°	4474	4429	4367
20°	4309	4240	4124
25°	4132	4042	3790
30°	3916	3791	3414
35°	3709	3504	3158
40°	3498	3193	2874
45°	3298	2952	2598
50°	3053	2740	2317
55°	2824	2483	2075
60°	2587	2218	1859
65°	2276	1942	1646
70°	1875	1701	1399
75°	1491	1302	1365
80°	1002	939	876
85°	624	749	874

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3298 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	325.3	4.7
10°-20°	892.7	13.0
20°-30°	1235.9	18.0
30°-40°	1317.8	19.2
40°-50°	1202.2	17.5
50°-60°	941.9	13.7
60°-70°	613.9	8.9
70°-80°	272.0	4.0
80°-90°	58.4	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2453.9	35.8
0°-40°	3771.7	55.0
0°-60°	5915.8	86.2
0°-90°	6860.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6860.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3494	3494	3494	3494	3494	
5°	3434	3430	3430	3426	3426	326
15°	3212	3212	3179	3147	3135	903
25°	2783	2767	2723	2626	2553	1278
35°	2258	2242	2133	1971	1923	1412
45°	1733	1697	1551	1422	1365	1335
55°	1204	1168	1058	933	885	1080
65°	715	675	610	622	517	705
75°	287	267	250	238	263	307
85°	40	44	48	52	57	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3494.4	3494.4	3494.4	3494.4	3494.4
2.5°	3470.2	3470.2	3470.2	3466.1	3466.1
5°	3433.8	3429.8	3429.8	3425.7	3425.7
7.5°	3405.5	3401.5	3397.4	3393.4	3385.3
10°	3365.1	3365.1	3361.1	3340.9	3336.8
12.5°	3300.5	3296.4	3280.3	3252.0	3243.9
15°	3211.6	3211.6	3179.3	3147.0	3134.9
17.5°	3114.7	3110.6	3070.2	3037.9	3021.7
20°	3009.6	3001.5	2961.1	2908.6	2880.3
22.5°	2892.5	2892.5	2844.0	2775.3	2747.0
25°	2783.4	2767.2	2722.8	2625.8	2553.1
27.5°	2658.2	2633.9	2585.4	2448.1	2363.3
30°	2520.8	2508.7	2440.0	2262.3	2197.6
32.5°	2391.5	2371.3	2298.6	2112.8	2060.3
35°	2258.2	2242.1	2133.0	1971.4	1922.9
37.5°	2124.9	2104.7	1967.4	1838.1	1777.5
40°	1991.6	1967.4	1817.9	1700.7	1636.1
42.5°	1866.4	1834.1	1688.6	1563.4	1490.7
45°	1733.1	1696.7	1551.3	1422.0	1365.4
47.5°	1599.7	1567.4	1434.1	1300.8	1236.2
50°	1458.4	1430.1	1308.9	1175.6	1106.9
52.5°	1341.2	1296.8	1179.6	1046.3	989.7
55°	1203.8	1167.5	1058.4	933.2	884.7
57.5°	1078.6	1042.3	941.3	824.1	783.7
60°	961.5	908.9	824.1	723.1	690.8
62.5°	832.2	791.8	719.1	634.2	674.6
65°	715.0	674.6	610.0	622.1	517.1
67.5°	585.8	565.6	509.0	452.5	436.3
70°	476.7	452.5	432.3	371.7	355.5
72.5°	379.7	355.5	327.2	294.9	282.8
75°	286.8	266.6	250.5	238.3	262.6
77.5°	197.9	189.9	177.7	165.6	161.6
80°	129.3	125.2	121.2	117.2	113.1
82.5°	76.8	76.8	76.8	76.8	76.8
85°	40.4	44.4	48.5	52.5	56.6
87.5°	24.2	24.2	28.3	32.3	36.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)